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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/777,094	02/13/2004	Gordon Roberts	85827-90	4548

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EXAMINER

TAYONG, HELENE E

ART UNIT	PAPER NUMBER
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2611

MAIL DATE	DELIVERY MODE
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07/02/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Office Action Summary	Application No. 10/777,094	Applicant(s) ROBERTS ET AL.	
	Examiner Helene Tayong	Art Unit 2611	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-57 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-57 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-4, 6,7-14,16-24,27-34,36-45,47-49 and 50-57 rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi (US 647642 B2) in view of Tamamura (US 4733167).

(1) with regards to claims 1,11,21,31,41, 50-57;

Yamaguchi in figure (1) discloses an evaluation system comprising:
a processing unit operative for:

receiving a first signal released by a first signal path, the first signal path including a digital-to-analog converter and a first analog-to-digital converter(14);

receiving a second signal released by a second signal path, the second signal path including the digital-to-analog converter and a second analog-to-digital converter (fig. 1, DUT (ADC);

processing the first signal and the second signal to derive a noise component associated to a certain source of noise (fig. 25, 111), the certain source of noise being a selected one of the digital-to-analog converter(112), the first analog-to-digital

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converter(113) and the second analog-to-digital converter, said processing including: processing said first signal to derive a first frequency domain signal (fig. 25, 114);

processing the first frequency domain signal to derive a first noise component associated with the first signal (fig. 25, 115);

an output for releasing a signal indicative of the noise component associated to the certain source of noise(115).

Yamaguchi discloses all of the subject matter disclosed above, but for teaching receiving a second signal released by a second signal path, the second signal path including the digital-to-analog converter and a second analog-to-digital converter;

processing said second signal to derive a second frequency domain signal;

processing said second signal to derive a second frequency domain signal;

processing the first frequency domain signal and the second frequency domain signal to derive a third noise component, the third noise component being indicative of the noise component associated with the certain source of noise;

However, Tamamura in the same field of endeavor teaches the second signal path (fig. 1, 1,7, 9).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the second signal path of Tamamura to the method of Yamaaguchi in order to provide a circuit for making very accurate measurements of the dynamic characteristics of a DAC while the DAC is operated at a high converting rate, and which has adjustable sampling points. The motivation to combine the method of

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Tamamura to the method of Yamaguchi would be to evaluate systems used for measurements.

It would have been obvious to one of ordinary skill in the art at time the invention was made to utilize the same method by Yamaguchi to processing said second signal to derive a second frequency domain signal (fig. 25, 114); and processing said second signal to derive a second frequency domain signal (fig. 25, 115); processing the first frequency domain signal and the second frequency domain signal to derive a third noise component, the third noise component being indicative of the noise component associated with the certain source of noise (fig. 25, 114, 115)88;

(2) with regards to claims 2,12,22,32 and 42;

Yamaaguchi further discloses wherein said processing unit is adapted for:

applying a subtraction operation on the first frequency domain signal and the second frequency domain signal to derive a difference signal; processing the difference signal to derive the third noise component (col. 5, lines 24-44).

(3) with regards to claims 3, 6,,7,23,26,,27,33 ,36, 37,44 , 47 and 48

Same rejection as in claims 1 above

(4) with regards to claims 4, 14, 24, 34 and 45,;

Yamaaguchi further discloses wherein the noise component associated to the certain source of noise includes

c. quantization noise (col. 2, 1lines 34-36);

(5) with regards to claims 8, 18,28,38 and 49;

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- a. Yamaaguchi further discloses applying a fast fourrier transform (FFT) on said first signal to derive the first frequency domain signal (fig. 25, 114);
- b. Yamaaguchi further discloses applying a fast fourrier transform (FFT) on said second signal to derive the second frequency domain signal (fig. 25, 114).

(6) with regards to claim s 9, 19,29 and 39;

same rejection as in claim 1;

(7) with regards to claim s 10, 20,30,40 and 43;

Yamaaguchi further discloses wherein the transmission parameter data element is selected from the set consisting of a signal-to-noise ratio (SNR), a signal-to-noise-and-distortion ratio (SNDR or SINAD), a total-harmonic distortion (THD) and spurious free dynamic range (SFDR) (fig. 25, 115).

(8) with regards to claims 50-57;

Claims 50-57 are rejected under same disclosure as in claim 1 above.

3. Claims 5,15,25,25,and 46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamaguchi (US 647642 B2) and Tamamura (US 4733167) as applied to claims 1,11,21,31 and 41 above and further in view of Wilstrup et al.(US 6356850 B1).

(1) with regards to claims 5, 15,25,35 and 46;

Yamaguchi as modified by Tamamura discloses all of the above but for specifically teaching wherein the noise component associated to the certain source of noise excludes jitter induced noise.

However, Wilstrup et al in the same filed of endeavor teaches wherein the noise component associated to the certain source of noise excludes jitter induced noise (fig. 2,208 and clo5, lines 15-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to add the method of Wilstrup et al. to the method of Yamaguchi as modified by Tamamura in order to provide measurement of ISI, DCD, RJ and PJ in serial data communications. The motivation to incorporate this method of Wilstrup et al to the Yamaguchi as modified by Tamamura would be to analyze components of a signal.

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Furukawa et al (US 6687868 B1) discloses a test device for electrically testing electronic device (DUT).

5.. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Tayong whose telephone number is 571-270-1675. The examiner can normally be reached on Monday-Friday 8:00 am to 5:30 pm EST.

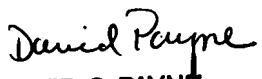
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David C. Payne can be reached on 571-272-3024. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Helene Tayong

6/25/07


DAVID C. PAYNE
SUPERVISORY PATENT EXAMINER